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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,406	06/27/2001	Masashi Kitabayashi	109321	1332

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OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

SEVER, ANDREW T

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 07/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/891,406

Applicant(s)

KITABAYASHI, MASASHI

Examiner

Andrew T Sever

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☒ Claim(s) 16 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The corrected or substitute drawings were received on June 26, 2002. These drawings are approved.

Claim Objections

2. Claims 16 and 17 are objected to as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not well known what a “visual compensating film” does or is and it is not described in the description in a way that one skilled in the art could determine what it is for sure. For purposes of a prior art examination it will be assumed that this is an anti-reflection/glare film.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-13, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashizume et al. (US 6,375,328) and further in view of Oka et al. (US 6,340,404) and Taniguchi (US 4,765,729).

Hashizume teaches in figure 5 a projector comprising a light source (8), a color separating optical system that separates a light beam emitted from the light source into a plurality of colors (924), a plurality of electro-optical apparatuses (925R, 925G, 925B) that modulate the color beams that have been separated by the color separating optical system (924), a prism (961R, 961G, 961B) that synthesizes the color beams that have been modulated by these electro-optical apparatuses (925R, 925G, 925B); and a projection lens (6) that projects light emitted from the prism as is claimed by applicant's claims 5 and 6. Hashizume further teaches in column 10 and figure 6 the structure of a dust preventing member that is a part of the frame holding both the electro-optical apparatus (925 R) and transparent plates (962 R) and in column 16 lines 59-65 that the dust-preventing member (965R) can be formed of resin as is claimed in applicant's claims 7 and 8. Hashizume teaches in column 11 line 63 – column 12 line 2 that the transparent plates (962 R, G, B and 93 R, G, B) which surround the liquid crystal device and form part of the electro-optical apparatuses can be treated for electrostatic protection in order to prevent dust effectively. Hashizume however, does not necessarily teach the content of that electrostatic protection.

Oka et al. Teaches in column 1 lines 10-41, that it is useful to provide optical functional films, which are antireflection films on such devices as polarizing plates in liquid crystal displays, optical lenses, and other glass components and support structures. Often this also includes antistatic coatings, which repel dust as taught in column 12 lines 26-34. This antistatic property is provided to the antiglare layer by using conductive particulates of tin oxide or other inorganic conductive substances in a resin. Taniguchi

teaches in column 6 lines 13-23 that besides tin oxide other metals such as Au, Ag, and Al can be used along with films of inorganic oxides such as indium oxide and tin oxide (SnO_2) can be used to form a transparent electro-conductive layer which gives an optical article having such a layer both anti-reflection effects and anti-static effects as is claimed by applicant's claim 1, 2, 9-13 and 16-18. The resin can include Silica as taught in column 9 lines 34-47 and as claimed by applicant's claim 3. Since both Hashizume and Oka teaches that it is desirable to impart anti-static properties to optical components including electro-optical apparatuses; it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Oka and Taniguchi to use conductive particulates such as any of Ag, Au, Al, and other metallic particulates and/or, tin oxide for an antiglare and antistatic layer and to place conductive particulates in it in order to make it also an antistatic layer, so as to reduce the dust that clings to the electro-optical element in the projector taught by Hashizume.

With regards to claims 9-13 and 18, Oka teaches in column 1 lines 10-14 that the antiglare and antistatic films are useful on polarizing plates, glass lenses, and other optical components. Hashizume teaches some of these components in figure 5 that in light of Oka's teaching it would be obvious for one with ordinary skill in the art at the time the invention was made to put an antistatic film of the type taught by Oka and Taniguchi on. Hashizume teaches 3 field lens (953, 952, 951), which are all glass lenses and in view of the teachings of Oka it would be obvious to put Oka and Taniguchi's anti-static treatment on as is claimed by applicant's claim 9. Hashizume teaches three polarizers (960R, 960G, and 960B) disposed adjacent to a light source side of the electro-

optical apparatus, which are a type of polarizing plates and in view of the teachings of Oka it would be obvious to put Oka and Taniguchi's anti-static treatment on as is claimed by applicant's claim 10. Hashizume teaches 3 emergent polarizers (961R, 961G, 961B) disposed adjacent to the projection lens side of the electro-optical apparatuses; the polarizers are a type of polarizing plates and in view of the teachings of Oka it would be obvious to put Oka and Taniguchi's anti-static treatment on as is claimed by applicant's claim 12. Hashizume teaches a prism for synthesizing the color beams that have been modulate by the electro-optical apparatus, which are optical glass components that commonly are known to also contain polarizers and in view of the teachings of Oka it would be obvious to put Oka and Taniguchi's anti-static treatment on as is claimed by applicant's claim 18. With regards to claims 11 and 13 it is well known to form optical components by bonding them to light transmitting substrates and to place the antistatic coating taught by Oka and Taniguchi on the substrate in addition or instead of placing it on the actual component such as incident polarizers and emergent polarizers as claimed in applicant's claims 11 and 13 respectively.

3. Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Hashizume in view of Oka and Taniguchi as applied to claims 1-3, 5-13, and 16-18 above, and further in view of Ohtsuka et al. (US 6,423,404.)

Hashizume in view of Oka and Taniguchi as described in more detail above, teaches a projector comprising a light source, a color separating optical system that separates a light beam emitted from the light source into a plurality of colors, a plurality

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of electro-optical apparatuses that modulate the color beams that have been separated by the color separating optical system, a prism that synthesizes the color beams that have been modulated by these electro-optical apparatuses; and a projection lens that projects light emitted from the prism as is claimed by applicant's claims 9-18. Hashizume in view of Oka further teaches that the electro-optical element is sandwiched between a pair of substrates, which have antistatic properties. An inorganic layer that has silica and conductive particulates that include any of Au, Ag, and Al as well as tin oxide, in it to provides these antistatic properties. However, Hashizume in view of Oka and Taniguchi does not specifically teach a range of resistance values for this layer.

Ohtsuka et al. teaches in column 1 lines 8-22 a transparent layered structure for use on display components that imparts an electric field shielding function as well as antireflection and antistatic functions. Further Ohtsuka teaches in column 2 lines 32-39 that its desirable for the surface resistance value to range from about $10^6 \Omega/\square$ to $10^{10} \Omega/\square$ for achieving the desired electrostatic charging prevention and electric field shielding. Since the purpose of the antistatic layers provided on the surface of the substrates sandwiching the electro-optical element of Hashizume in view of Oka and Taniguchi's projector is to prevent the build of electrostatic charge (which attracts dust), it would have been obvious to one of ordinary skill in the art to design the anti-static layer of Hashizume in view of Oka and Taniguchi so that it has a resistance value about $10^6 \Omega/\square$ to $10^{10} \Omega/\square$.

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4. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashizume in view of Oka and Taniguchi as applied to claims 2, 3, 9-13, and 16-18 above, and further in view of Suzuki et al. (US 6,379,010).

Hashizume in view of Oka and Taniguchi as described in more detail above, teaches a projector comprising a light source, a color separating optical system that separates a light beam emitted from the light source into a plurality of colors, a plurality of electro-optical apparatuses that modulate the color beams that have been separated by the color separating optical system, a prism that synthesizes the color beams that have been modulated by these electro-optical apparatuses; and a projection lens that projects light emitted from the prism as is claimed by applicant's claims 9-18. Hashizume in view of Oka and Taniguchi further teaches that the electro-optical element is sandwiched between a pair of substrates, which have antistatic properties. An inorganic layer that has silica and conductive particulates including any of Ag, Au, Al, as well as inorganic compounds like tin oxide in it, provides these antistatic properties. However, Hashizume in view of Oka and Taniguchi does not teach the use of a phase plate disposed adjacent to at least one of a light source side and a projection lens side of the electro-optical apparatus, at least one surface of the phase plate being provided with at least one of an antistatic layer and an antistatic treatment.

Phase plates are well known to be provided in projectors. One example is taught in Suzuki et al. in figure 3 a phase plate (half wave plate 20Bi) is provided in one path. Since Hashizume in view of Oka and Taniguchi teaches that it is beneficial to put anti-static coatings on optical components which would include phase plates, it would have

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been obvious to one of ordinary skill in the art at the time the invention was made to put an anti-static coating on the phase plate in order to prevent dust from adhering to the plate. .

With regards to claims 15 it is well known to form optical components by bonding them to light transmitting substrates and to place the antistatic coating taught by Oka and Taniguchi on the substrate in addition or instead of placing it on the actual component such as a phase plate as claimed in applicant's claim 15.

Response to Arguments

5. Applicant's arguments filed June 26, 2003 have been fully considered but they are not persuasive.

With regards to the arguments against the 35 USC 112 first paragraph rejection:

Applicant has amended claims 16 and 17 to use the term "visual compensating film", which is supported by the specification as originally filed, therefore the 35 USC 112 first paragraph rejection has been removed. However like the original claimed "visual compensating sheet", "visual compensating film" is not a term of art. Applicant argues that it is disclosed in the specification as an antistatic element, if this were true, then why would an antistatic element need antistatic treatment as claims 16 and 17 claim? From a reading of applicant's specification and claims, it appears that the "visual compensating film" serves some other primary purpose other than just as an antistatic element. It is true that after it receives the antistatic treatment it becomes an antistatic element, but before hand it appears to be a retarder or some other similar film.

With regards to the 35 USC 130(a) rejection of claims 1-3, 5-13, and 6-18, applicant initially argues that Hashizume does not teach an antistatic layer for the transparent plates 962 (clearly the frames as the claims have been amended have antistatic or dust preventing features, since Hashizume specifies them as dust preventing frames.) This is in error as Hashizume clearly teaches in column 11 lines 63 –column 12 line 2 that the transparent plates can be treated with a surfactant, or treated for electrostatic protection. Clearly Hashizume teaches treating these plates for electrostatic protection.

Applicant acknowledges this, but further argues that a surfactant differs from applicant's claim invention. The office points out that applicant's claim 1, does not eliminate the use of a surfactant, however this is irrelevant since as the underline added above for emphasis points out, Hashizume teaches the use of *either* a surfactant or electrostatic protection. As stated by the rejection, Hashizume does not teach the content of that electrostatic protection, however the use of conductive particles is well known in the art for providing electrostatic protection. This teaching is provided by Oka et al. and Taniguchi.

Applicant argues against Taniguchi and Oka for two basic reasons: first Oka and Taniguchi teach particles that are not included in applicant's list and do not teach all the particles in applicant's list, and second there is no motivation for combining Oka and/or Taniguchi with Hashizume. With regards to the second argument Oka teaches that the antistatic coating repel dusts and that coating in general are useful for optical devices such as polarizing plates in liquid crystal displays (which is what Hashizume is teaching.)

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With regards to the first argument, Applicant's claim 1 reads: "The conductive particulates include any of:" The use of these words constitutes a Markush group and the fact that Taniguchi teaches at least one compound in the Markush group means that Taniguchi in fact does anticipate the entire group (see MPEP 2131.02). As stated in previous arguments the office also considers Oka as teaching the group since the office holds tin oxide as an obvious variant of the claimed tin.

With regards to the rejection of claim 4, applicant argues that Ohtsuka does not teach the entire claimed range see MPEP 2131.03. "When, as by a recitation of ranges or otherwise, a claim covers several compositions, the claim is anticipated' if one of them is in the prior art." (Titanium Metals Corp. v. Banner 778 F. 2d 775, 227 USPQ 773 (Fed. Cir. 1985)). With regards to the alleged lack of motivation, again Ohtsuka teaches in column 2 lines 32-39 that it is desirable for display components to have resistance values in the specified range; the primary reference: Hashizume clearly teaches display components with antistatic treatments.

With regards to claims 14 and 15, the addition of phase plates is well known and the office in the 103 rejection is presenting the fact that those with ordinary skill in the art at the time the invention was made would recognize that it is obvious to place a phase plate in a projector. Suzuki was provided as an example of a well-known fact.

Applicant's arguments are not persuasive and the rejection stands. This rejection is therefore made final.

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Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Sever whose telephone number is 703-305-4036. The examiner can normally be reached on 8:30-5:00.

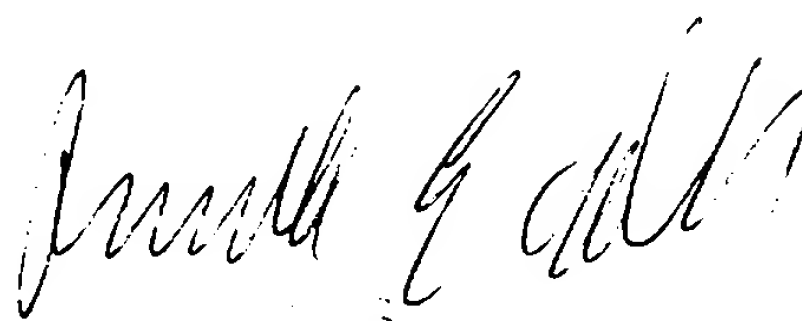
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell Adams can be reached on 703-308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

AS

July 19, 2003


J. M. G. SMITH
SUPERVISOR, ART EXAMINER
TECHNICAL CENTER 2000